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## CURRENT LITERATURE.

### BOOK REVIEWS.

#### A text-book of general botany.

THE MAKING of a book is now looked upon as almost reprehensible, and the writer is mentally challenged by his fellows to show valid reason for its publication. The new *Text-book of general botany*<sup>1</sup> must answer this challenge, which is the more peremptory in view of the large claim made by a title devoid of any limitation.

We turn to the preface to learn what the author has to say in justification of his book and the standards by which he wishes it judged. We are told that "the work is intended as an introduction to the study of botany"; and that "the text is based upon the laboratory work required of beginners at Columbia of which it is but an exposition, being supplemented by an extended course of lectures and prescribed reading." In view of its introductory character, would it not have been well to select a title less comprehensive, one by which the book might be more justly designated?

The statement regarding the relation of the book to the work prescribed for beginners in Columbia University is of much interest from a pedagogical standpoint. In order to understand this, it must be said, that, after presenting a group of facts, Dr. Curtis gives general directions for laboratory examination of plants illustrating them. Accompanying this is a list of reference books, in which, presumably the prescribed reading is assigned. The laboratory outlines cover the subjects of histology, physiology, and morphology, and involve the use of material in large amount, which, we infer from the preface, each student is expected to collect and prepare for himself. We are utterly unable to reconcile this amount of work with the amount of time allotted for its performance, viz., two mornings per week for one year—at most 300 hours! Dr. Curtis must have students with extraordinary powers of accomplishing work if *half* that here laid out is really done in a year. Does he realize that he has called for nearly sixty histological preparations, over thirty physiological experiments, and a more or less complete morphological examination of about one hundred plants? In this reckoning we have included as two plants such a direction as this:

<sup>1</sup>CURTIS, CARLTON C.: A text-book of general botany. Large 8vo. pp. viii + 359; figs. 87. New York: Longmans, Green & Co. 1897. \$3.  
1898]

Compare *Marsilea* and *Isoetes* with *Pteris*. Do they differ as to growth, branching and leaf arrangement? Which has the highest type of leaf and stem? Has each the homologue of the sorus, indusium, sporangium and annulus? Are the sporangia situated as in *Pteris*? Is the arrangement of the two kinds of spores the same in both genera?

How many hours will that take? And how many, the comparison of *Equisetum* with *Pteris*, requiring eight microscopical preparations (of which five are sections) besides observation of the external anatomy? That such directions may be useful we readily concede; but that anywhere they can be carried out in 300 hours, or 600, we must seriously doubt.

It goes without saying that one in Dr. Curtis' position, with adequate facilities at his command, is capable of enumerating the chief facts of botany when he sets about it; accordingly we find in this book a fairly accurate and up-to-date account of plant structure and phenomena. The facts are made coherent by a thread of philosophical theory which stimulates thought on the part of the student and leaves him with an open mind. The book may therefore serve a good purpose as a reference book in laboratories, particularly as it is well illustrated by new figures.

A most important consideration in a work for beginners is the presentation of the subject. As to manner, this is somewhat unfortunate. Dr. Curtis' English syntax is not above reproach, and his use of words is frequently inelegant or even incorrect. As to matter, it may be questioned whether histology is well adapted for introducing the beginner to the science of botany. What advantage has it over "analysis" which we all decry? Ought not the student's first impression of the plant rather be of an *organism*, capable of *doing* something? Has he at the outset any knowledge which can illuminate the details of histology and make them interesting and intelligible? If it be replied that the student must know structure before he can understand function, it is granted; yet his knowledge of structure must not be deadened by study of detail, it must be vivified study of action.

Through these considerations we are led to the conclusion that the book before us is a convenient compendium of the well-known facts of botany and a laboratory guide with useful suggestions as to illustrative material. In these things it is no better than its predecessors; and this, together with some faults in plan and execution deprive it of a valid *raison d'être*.—C. R. B.

#### A manual of botany.<sup>2</sup>

THE first edition of this valuable manual appeared in 1895, being intended to take the place of Bentley's *Manual*. In fact, it was the original intention to

<sup>2</sup>GREEN, J. REYNOLDS.: A manual of botany. In two volumes, 2d edition. Vol. I. Morphology and Anatomy, xii + 406. 7s 6d. Vol. II. Classification and Physiology, xi + 541. 10s. J. & A. Churchill: London. 1897.